The public development financial institutions and the long-term financing*

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Abstract

This article aims to discuss the role of public development financial institutions (DFI) on the long-term financing of economy and, consequently, on economic development, as well as to expand the research presented in Ferraz, Além and Madeira (2013). The general outlook of the DFIs in the world is presented, highlighting their historical performance. Besides, in order to illustrate the importance of these institutions, this article contains a more detailed analysis of a sample of eight national DFIs, addressing qualitative and quantitative aspects. The present study extends the concept of development institutions, which allows addressing relevant institutions of some developed countries. In addition, the national system of development financial institutions in the sample countries were also described. This paper concludes that the existence of large

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DFIs, diversified and with economic relevance, is important to the development trajectory of the nations.

Keywords: Public development financial institutions. Long-term financing. Development financing. Economic development.

Introduction

Since the 19th century, public development financial institutions (DFIs), have played a crucial role in the industrial development of many countries, providing resources for a structural change in economy. These institutions are fundamental to economic development through the use of various financial tools in important segments and sectors. Its relevance to the long-term financing of economies is evident in the analyses of the financial systems of many countries. Moreover, the 2008 crisis showed that the existence of solid DFIs was imperative for the fast recovery of the credit market of their countries, once these institutions act in a stabilizing manner, complementing the private sector.

This article aims at examining the contributions of DFIs to long-term financing in national economies and, consequently, their importance to economic development, updating an article by Ferraz, Além and Madeira (2013), with some methodological changes and a widened database.

National DFIs will be the focus of this analysis, differing from the aforementioned article, which just considered the development banks. This change allowed the inclusion of relevant institutions from developed countries that have other roles in addition to development banks' typical ones. We intend to show that the DFIs' role is relevant in countries that are in diverse development stages, either at stable periods or during economic crisis.

In order to do so, this article will be divided into five parts, including this introduction and the conclusion. In the following section, there will be a brief theoretical discussion, which will be the basis for the analysis. The third section contains a discussion concerning the DFIs around the world and their importance for development. In the fourth section, we will present empirical evidence based on a sample of eight

national DFIs from different countries, considering also the national systems of the DFIs of these countries. Finally, there is the conclusion that these institutions are large-sized, diversified and economically relevant, having a fundamental role in economic development.

Theoretical reference

The definition of DFIs is often confused with the definition of development banks (DB), mainly because most of the DFIs are DBs, according to the definitions found in literature.[1] However, the definition of DFIs encompasses other institutional structures,[2] for example small credit agencies, export credit agencies (ECA), international cooperation organizations and mixed institutions, which have initiatives that are typical of DBs (such as long-term financing to specific segments).[3] DFIs may also be: (i) public or private, which is the case of some ECAs that act in the export sector by means of guarantees granted by the government, and (ii) regional, national or multilateral. In this article, only the national public institutions (DFIs) will be considered, and they are defined as the state-owned development financial institutions, which make use of: (i) a narrow mandate to act in market segments or specific sectors that generate relevant socioeconomic impact; or (ii) a broad mandate to provide financing to the socioeconomic development of a certain region.

Public banks in the financial system, along with their objectives and ways of acting, have always been the target of academic debate among those who defend these institutions and those who are

[1] For instance, Luna-Martínez and Vicente (2012) and UN-DESA (2005).

[2] A more encompassing concept was also presented by BDC (2009).

[3] For example, the public multiple banks and the institutions that manage pension funds or saving deposits.

against them. Most of the DFIs, which gained notoriety for their countercyclical role during the 2008 international financial crisis, are inserted in this context. In spite of the fact that many experts defend the existence of the DFIs, there are still controversies and criticism remaining in the debate. Despite their size and importance to the economies, little academic research has been done about the roles of the DFIs.[4] Most of the bibliography related to the theme has a broader approach, trying to identify the general role of the financial system on the economic growth.[5]

This article is based on the post-Keynesian economics, which is part of the credit rationing approach, describing a situation in which, even when the agents are willing to pay a higher interest rate to obtain the resources to finance their investments, the banks may refuse to provide the financing. The existence of DFIs is justified by the need for supplying the necessary credit to investment, unavailable in the private financial system.[6] The post-Keynesian school is associated to the monetary economy concept, marked by the existence of a fundamental or strong uncertainty.[7] In a monetary economy, the evolving historical time prevails, without the possibility of returning to a previous moment. Due to the historical time, uncertainty cannot be calculated as risk is, for there is no information available about all the possible economic facts that will happen in the future. Because of the time gap between the moment the economic decision is made and

[4] See Luna-Martínez and Vicente (2012).

[5] There are two main groups of approaches concerning this theme: (i) one having a historical/institutional character; and (ii) one with two possibilities associated to economic theories (financial repression and credit rationing). For details about the different approaches, as well as the differences between them, see Ferraz, Além and Madeira (2013).

[6] See Hermann (2011), Maia (2009), Mankiw (1991), Stiglitz (1990; 1993) and Stiglitz and Weiss (1981; 1983).

[7] See Bertocco (2007), Davidson (2000), Glickman (1994) and Lawson (1985).

its results, the agents act according to their expectation over future gains. Once an agent makes a decision at present that proves to be unsuccessful in the future, there will be concrete losses that cannot be reverted, considering that the agent will not be able to return to the past to change their decision, once historical time is irreversible.

Investment decisions are based on a portfolio of capital allocation options in which the assets are ranked, contemplating their expected return and liquidity level.[8] At one end, there is currency, being the asset with the highest liquidity level and no profitability. At the other end, there are the investment assets (capital goods – machinery and equipment), generating a high level of profitability, but have the lowest liquidity level. The agents will demand the investment assets if the forecast profits are high enough to compensate for their high level of illiquidity, because, in case the profit expectations are frustrated, there will be a high cost for converting capital goods into currency. Even if they do sell the capital goods, they will certainly not recover the initial investment made for the purchase of these assets. This same reasoning can be used in relation to the other assets with intermediate levels of profitability and liquidity. This preference for liquidity is not only restricted to investors, but also applies to banks, which are responsible for credit provision in economy.[9] At this point, it is important to highlight that there may be a lack of credit to investments even if there are fairly developed national and international financial systems. Thus, the importance of the DFIs is far deeper than to correct a "market failure", marked by the existence of incomplete financial markets. Due to the

[8] The post-Keynesians base their theory on capital application presented in Keynes (1936), chapter 17. See also Carvalho (1997) and Keynes (1939).

[9] For the discussion of the preference for liquidity, see Bibow (2005), Carvalho (1999; 2007), Keynes (1937a; 1937b), Kregel (1988), Paula (1998) and Wray (2009; 2010).

uncertainty of the future, depending on the features of new sectors and projects that demand resources, private banks may not offer credit, even if the financial system is fully developed.

As highlighted by Mazzucato (2013), the existence of a "patient capital" is crucial for the development of certain sectors that are able to promote important structural changes in the economy.

The existence of the DFIs is then justified by sectors or investment projects that require financing but bring about high levels of uncertainty as to their future success. Therefore, they are disadvantaged by the private financial system in favor of sectors and projects that involve investments whose expected results are less uncertain. Those neglected sectors and projects are highly complex ones that are usually expensive and demand sophisticated expertise for their evaluation, which generate positive impact throughout economy (positive externalities) and/or whose social returns are higher than the private ones. Among those that inspire the most uncertainty are: infrastructure; technological innovation; support to micro, small and medium enterprises (MSME); microcredit; and sustainable economic projects, as the development of alternative energy sources and other green economy initiatives. This lack of required financing can be observed in either developed or developing countries, and it may occur even in periods of economic stability. Nonetheless, the lack of credit worsens during economic crisis. Evidence shows that the behavior of the financial system is procyclical: in a crisis situation, credit provision decreases more than it increases in times of economic growth. At times of trust crisis over the way the economy will turn, the preference for liquidity increases sharply. Therefore, credit becomes more expensive, scarce and concentrated in times of higher macroeconomic instability – exactly when the mechanisms of refinancing and financial support are most required. This deepens instability and impairs various investment projects, configuring

a "financial fragility" situation.[10] In such events, the DFIs have an important countercyclical role, providing resources to finance investment projects at times of private credit crunch.

The public DFIs around the world and their importance for development

DFIs are important to many countries, regardless of their stage of economic development, at periods of stability or during economic crisis. Their importance comes from the 19th century, a time when many public banks were essential to finance the industry in their countries. The widest dissemination of these institutions, however, happened after 1950, with the establishment of several national and multilateral DBs. Their influence is associated to several sectors and segments related to social and economic development. The national DFIs will be the focus of this paper. Historically, at times of stability, the provision of long-term financing for investment is the main task of the DFIs. During the crises, their countercyclical role is crucial. The economic relevance of these institutions cannot be underestimated: the combined assets of a sample of 19 DFIs[11] amounted for US$ 3.91 trillion in 2013. The financing of public policies is a crucial role of these institutions and, at times, the planning and performing of such policies as well. The effectiveness of the financial system as one of the pillars of economic development is directly linked to the ability of being innovative and directing

[10] See Kregel (1997), Minsky (1982; 1986), Crotty (2011) and Findley and Williams (1985).

[11] BNDES – Brazil; KfW – Germany; CDB – China; BDC – Canada; KoFC, KDB and KEXIM – South Korea; JFC, JBIC and DBJ – Japan; Nafinsa, Banobras and Bancomext – Mexico; VEB – Russia; CDC – France; DBSA – South Africa; ICO – Spain; CDP – Italy; SIDBI – India.

the resources to activities that can change the development route, leading the structural change process of the economy.

A study by the Business Development Bank of Canada (BDC) [BDC (2009)] listed 373 DFIs (public and private) in 92 countries and seven regions, analyzing 235 of those. The sample encompasses DBs (national, regional and multilateral), export and innovation agencies, international cooperation organizations and other development initiatives by the governments. One of the results of the research was that, in 2008, 16 countries of the Organization for the Economic Cooperation and Development (OECD) had, on average, from three to five DFIs (mostly public), showing the importance of these institutions in developed countries.

In a smaller sample, considering just the DBs,[12] among 94 institutions, 58 supported MSMEs, 41 supported foreign trade, and 36, infrastructure. It is important to highlight that many institutions support more than one segment. Concerning this topic, Luna-Martínez and Vicente (2012) concluded that 47% of the DBs[13] have a broad mandate, supporting numerous sectors and segments, while 53% have a more specific focus.

The international experience demonstrates that DFIs are very different among themselves; also, their priorities and challenges change according to the development stages of each country and the target market of each institution. It is possible to find institutions that act in a more encompassing manner and others that support only a certain niche. Some countries count on several DFIs to reach

[12] Defined in BDC (2009, p. 9) as: "a non-monetary financial intermediary controlled by the public sector. It primarily engages in making long-term loans that are beyond the capacity or willingness of the other financial institutions. The DB can also be defined as a financial institution dedicated to fund new businesses and economic development projects by providing equity capital and/or loan capital".

[13] The concept of DBs used by the authors is similar to the one used by BDC (2009).

several segments. The role scope of the DFIs generally encompasses innovation, infrastructure, MSMEs, exports, green economy and internationalization. Institutions that operate in various segments alternate their priorities before the challenges and opportunities that are presented to them, moving resources among them. However, even the institutions that operate in only one segment are able to prioritize their activities based on sub-segments or on the financial tools that are necessary to support the niche they are acting on at a certain moment in time. For instance, institutions that support MSMEs may prefer the development of a non-existent or a not-yet-solid tool in the market in which they act (venture capital, securities, guarantees etc.). Moreover, the DFIs that focus on exports may operate guarantees exclusively, with the credit operations being under the responsibility of the private sector.

Mazzucato and Penna (2014) highlight the importance of DFIs to segments like green economy. According to the authors, in 2012, DFIs were the main source of financing for adaptation projects and for mitigation of climate change effects, showing the importance of public intervention to lead the transition towards a sustainable development. Besides the permanent role of the DFIs in supporting investments in important segments for development, for the emergence of new innovative businesses and for facing the challenges of structural changes, these institutions are relevant in moments of credit market instability, mitigating the private credit crunch and enabling a faster recovery from an economic crisis.

As pointed out by the Conference Board of Canada (2010, p. 1), "Once a financial crisis hits, it is too late for governments to create institutional capacity to provide fall-back credit support". These institutions must already be solid and capable of responding quickly to extraordinary events, a feature that was nicknamed as "The Sleeping Beauty".

As much as possible, the DFIs' practice must motivate the private sector practice in the long-term financing and in the financing of more uncertain segments and sectors. This can be done through the implementation of financial innovations, which can be developed by the DFIs (that take the entry risk) and then adopted by the private sector, and/or through the use of instruments in a complementary or joint way (guarantees, unionized loans, securities, among others). Besides that, the DFIs' practice in the capital market providing liquidity or issuing assets is important to push the segment, reaching from mature companies to startups, using several tools, for instance equity stakes, private bonds, securities and venture capital.

Many startup companies are not attractive to the private sector due to the uncertainty about the financial results of the projects, mainly in sectors that have positive externality and a big impact on the economic development. The state intervention for the provision of long-term financing does not happen only through the DFIs. Some countries, such as The United States, use other institutional structures to provide long-term financing to important sectors to development.[14]

Next, some empirical evidence and international experiences illustrate the arguments shown in this section.

The relevance of DFIs to their economies and the long-term financing: empirical evidence and international experiences

Long-term financing structure differs among countries, as well as political features and economic environment. Therefore, pointing out the importance of DFIs in national economies demands an analysis of both their quantitative and qualitative aspects within

[14] For more information, see Weiss (2014).

the economic perspective in which they are inserted. This article is based on information from annual reports, presentations to investors and researchers, as well as literature on the subject, updating and advancing the study made by Ferraz, Além and Madeira (2013). The broadening of the definition from DBs to DFIs allowed the inclusion of great hybrid institutions[15] from developed countries that have other roles besides the traditional DBs ones. The analyzed sample was selected according to the features of the institutions, searching for large DFIs, which were diversified and economically relevant. The selected institutions are public and national; they finance various segments and/or sectors and have historical importance in the countries where they operate.

There are eight DFIs in the analyzed sample: (i) Brazilian Development Bank (BNDES), Brazil; (ii) China Development Bank (CDB), China; (iii) KfW Bankengruppe (KfW), Germany; (iv) Cassa Depositi e Prestiti (CDP), Italy; (v) Caisse des Dépôts et Consignations (CDC), France; (vi) Japan Finance Corporation (JFC), Japan; (vii) Instituto de Crédito Oficial (ICO), Spain; and (viii) Korea Development Bank (KDB), South Korea. It is important to highlight that some differences among the institutions demand a special data treatment so that the comparison is the least biased as possible. Besides receiving saving account deposits, CDP manages Treasure resources. Thus, in order to assess the institution's assets related to the promotion of development, it is necessary to exclude these items. CDP was established in 1850 as a deposits institution, and it was only in 2009 that it included typical DFIs activities. CDC also manages saving and pension funds, so it is necessary to disregard

[15] Like Cassa Depositi e Prestiti (Italy) and Caisse des Dépôts et Consignations (France). Two examples of Brazilian public financial institutions that act in some typical DFI segments are Banco do Brasil (agriculture) and Caixa Econômica Federal (housing).

these values in the data. KDB, in its turn, has become a financial conglomerate (KDB Financial Group) with many subsidiaries performing in segments that are common to the private sector, like asset management. Therefore, in order to assess KDB's role as a DFI, this study will only consider the data of the subsidiary focused on economic development and implementation of policies (KDB Bank). Still, it is not possible to exclude all the possible biases, once KDB Bank works with pension funds and acts as a commercial bank, receiving cash deposits. Among these institutions, CDP and CDC were established in the 19th century. They are all fundamental actors in the long-term financing and investment, prioritizing sectors and/or segments according to the level of development of their countries.

Table 1 shows that these institutions operate in various sectors/segments that are important to economic development and provide financing to MSMEs and large companies as well.

This scope analysis considers that a DFI and its subsidiaries act in a determined sector, size or segment if its acting is explicitly declared in its mandate or in its annual report, either by means of statistics, or by mentioning specific programs or funds, not taking into account if the support is small when compared to other supported areas.[16] In the case of housing, only the disbursements for individuals to buy or build their homes were considered.[17] The support to the building of popular homes is very common in these institutions, but financing generally goes straight to the company that is responsible for the construction. In addition, financing for home refurbishment in order to make them eco-efficient was not considered, being part of the green economy sector.

[16] CDB, for instance, prioritizes industry and infrastructure, but when supporting the MPMEs, it includes the financing to individual micro-entrepreneurs in the trade and services sectors.

[17] KfW has the KfW Home Ownership Programme, for the acquisition of homes, and the Energy-Efficient Construction, for the construction of eco-efficient homes.

Table 1

Scope of DFIs financing

		CDB (China)	KfW (Germany)	BNDES (Brazil)	CDP (Italy)	CDC (France)	JFC (Japan)	ICO (Spain)	KDB (South Korea)
Sectors	Agriculture	X		X			X	X	
	Infrastructure	X	X	X	X	X		X	X
	Manufacturing	X	X	X	X	X	X	X	X
	Services and trade	X	X	X		X	X	X	
Size	MSMEs	X	X	X	X	X	X	X	X
	Large companies	X	X	X	X	X		X	X
Segments	Housing		X		X	X			
	Exports		X	X	X	X		X	
	Innovation	X	X	X	X	X	X	X	X
	Green economy	X	X	X	X	X	X	X	X
	Internationalization	X	X	X	X	X	X	X	X
	Capital markets	X	X	X	X	X	X	X	X
	International financial cooperation	X	X					X	

Source: DFIs annual reports, 2013.

CDP and CDC make use of funding resources from savings deposits to finance housing for the citizens of their countries.

International financial cooperation is defined as acting in a given country, at a cost that is inferior to that of the market or even through donations, through any tool and without the demand of a return of any kind, be it a stake in national companies in the projects, or in the purchase of equipment.[18] Acting in the capital market, then, is considered when a DFI has a relevant and explicit acting in a country's capital market, providing liquidity, leading initiatives, or establishing partnerships with the private sector aiming at developing this market.

Differently from the approach in Ferraz, Além and Madeira (2013), the scope was divided into sectors, size and segments, for there is a big crossover among the categories. There may be institutions that operate exclusively with the MSMEs in industry, focusing on innovation. This segregation was used to try to provide the most precise possible information.

Other criterion used was the existence of equity stake in other DFIs. This is the case of CDC, CDP and ICO. When the stake is of 50% or more, we consider that the DFI associated or controlled is a branch acting in the promotion of development in a certain segment. Banque Publique D'Investissement (BPI France) supports MSMEs through tools like credit, venture capital and guarantees (collaterals). CDC has a 50% stake in BPI.

[18] The case of CDB is peculiar. Although the institution does not demand returns in contracts, there is an understanding that the established agreements should generate advantages to other sectors, such as infrastructure sector bids. Moreover, many of the international cooperation agreements are compelled by the strategic need to grant access to natural resources that do not exist in the Chinese territory (the loans are paid off through the export of certain products). For more details, see Sanderson and Forsythe (2012). Since it is difficult to typify these relationships, we consider that CDB acts in the international financing cooperation sector.

In 2012, CDP, from Italy, acquired relevant stakes in two DFIs: Servizi Assicurativi del Commercio Estero (Sace), which acts with export credit and project finance abroad, insurance and domestic guarantees (collaterals) in various sectors and/or segments, protection for international investment, among others; and Società Italiana per le Imprese all'Estero (Simest), which has as its main goal the promotion of investments abroad and the internationalization of the Italian companies, and works mainly with venture capital tools and stakes. CDP has, respectively, a 100% stake in Sace and a 76% stake in Simest.

ICO has a minor stake in two DFIs, Compañía Española de Reafianzamiento (Cersa) and Compañía Española de Financiación del Desarrollo (Cofides). Thus, they were not considered.

Table 1 shows that all the institutions support MSMEs, the industry, the green economy and innovation projects, the capital market and the internationalization; and only one of them does not support infrastructure and large companies.[19] We would like to stress that the operation in the sectors and/or segments are different across the DFIs, both in size and feature. Some countries already have a well-developed national infrastructure or credit market acting in these sectors, so DFIs focus on certain niches, such as social and urban infrastructure, and the investment projects related to alternative sources of energy generation.

Other important aspects are the prioritization that each DFI defines in its strategic planning and the available number of financial instruments. For instance, the financing of MSMEs may be different depending on the financial instruments provided or on

[19] JFC is the only one. However, there is a governance structure in Japan that allows JFC to inject fiscal resources in other institutions – Development Bank of Japan Inc. (DBJ) and The Shoko Chukin Bank Ltd. –, aiming to finance infrastructure in case of natural disasters, among other sectors (Ferraz, Além and Madeira, 2013).

the sub-segment served. Traditional financing for MSMEs may be supplied by the private market, but, in most cases, there is a lack of credit for seed or venture capital, or for startups, so the DFIs' role is important.

The financing for the trade and services sector is still shy in most of the institutions, but it is possible to highlight education, health and tourism, which are supported by almost all DFIs.

Observing the National System of Development Financial Institutions (NSDFI) of the sample countries, it is possible to conclude that, even in the sectors and/or segments where the DFIs do not act, there are other DFIs operating, completing the long-term financial system of these countries. Chart 1 shows some of these countries' institutions and the details of their acting, based on their mandate. The DFIs that are controlled by any institution of the sample on Table 1 are not cited.

Some segments count on more than one DFI acting in a determined country; nevertheless, there is generally a differentiation based on the financial instrument, thus avoiding a crossover of activities. The ECAs are common DFIs in the countries. They may operate both in credit to export and in guarantees. It is possible to see public ECAs in Asia. Both Japan and South Korea have institutions that act in the export segment, segregated by tools. In Spain, CESCE operates in this segment but it is being privatized, according to the trend of the agencies focusing on credit insurance and export guarantees in Europe.[20] However, it is important to point out that, in spite of the private nature of the ECAs in Europe, generally these private institutions manage the export guarantees granted by the governments.[21]

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[20] Euler Hermes (Germany) is a private institution, and Coface (France) was privatized in 1994.

[21] Law 8/2014, from April 22, 2014, describes how the Spanish State will act in the guarantee market after the privatization (https://www.boe.es/boe/dias/2014/04/23/pdfs/BOE-A-2014-4328.pdf).

Among the already mentioned DFIs, it is worth stressing the Development Bank of Japan (DBJ), which is in a privatization process. The institution, established in 1951, has had a fundamental role in the financing of the Japanese infrastructure and industry. Even after its privatization, DBJ will be able to be used as a resources distributing agent (originated from fiscal funds) for measures in extraordinary events (crisis or natural disasters) or in specific cases related to the development of sustainable products (Low Carbon Investment Promotion Act), or to the industry revitalization and to innovation (Industrial Revitalization Act). The aim is to increase the competitiveness of the Japanese industry (FERRAZ; ALÉM; MADEIRA, 2013). It is also worth to mention the Shoko Chukin Bank – established in 1936 and focusing on MSMEs –, which is going through the same process. The role of the support to MPMEs will be under JFC's responsibility. Therefore, like DBJ, this bank will also be able to receive financial injection in some situations.

Chart 1

Other DFIs of the sample countries

	DFIs	Sector/Size/ Segment	Details
China	The Export-Import Bank of China	Export, import and internationalization	
	Agricultural Development Bank	Agriculture	
Germany	Rentenbank	Agriculture	
	17 Regional DFIs	Miscellaneous	

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(Continuation)

	DFIs	Sector/Size/ Segment	Details
Brazil	Financiadora de estudos e projetos (FINEP)	Innovation	
	24 regional DFIs (regional and state institutions)*	Miscellaneous	Such as Banco de Desenvolvimento de Minas Gerais (BDMG), Banco Regional de Desenvolvimento do Extremo Sul (BRDE), Banco do Nordeste (BNB) etc.
	Other public banks	Miscellaneous	Some public banks have outstanding performance in specific segments of long-term financing, such as Caixa Econômica Federal (CEF) in housing and Banco do Brasil (BB) in agriculture.
France	Agence de l'Environnement et de la Maîtrise de l'Énergie (ADEME)	Environment	
	Agence Française de Développement (AFD)	International Financial Cooperation	

(Continue)

(Continuation)

	DFIs	Sector/Size/ Segment	Details
Japan	Development Bank of Japan (DBJ)	Miscellaneous	The institution is with its privatization scheduled. However, the Government is considering delaying this process.
	Shoko Chukin Bank	MSMEs	Same as DBJ, however, the Government already has less than 50% of participation.
	Japan International Cooperation Agency (JICA)	International Financial Cooperation	
	Nippon Export and Investment Insurance (NEXI)	Export and Internationalization	Insurance
	Japan Bank for International Cooperation (JBIC)	Export and Internationalization	Credit and guarantees
Spain	Compañia Española de Reafianzamiento (CERSA)	MSMEs	Guarantees
	Empresa Nacional de Innovación (ENISA)	Innovation (MSMEs)	Credit and venture capital
	Compañía Española de Seguros de Crédito a la Exportación (CESCE)	Export and Internationalization	Insurance and guarantees. Under a process of privatization.
	La Compañía Española de Financiación del Desarrollo (COFIDES)	Internationalization	

(Continue)

(Continuation)

	DFIs	Sector/Size/ Segment	Details
South Korea	Export-Import Bank of Korea (Korea Eximbank)	Export, Import and Internationalization	
	Industrial Bank of Korea (IBK)	Miscellaneous	It receives deposits from individuals and has activities of commercial banks. It has stocks stocks on the market, but it is controlled by the Government. Priority for MSME and manufacturing.
	Small & medium Business Corporation (SBC)	MSMEs	Credit and consultancy
	Korea Trade Insurance Corporation (K-Sure)	Export and Internationalization	Insurance and guarantees
	Korea Credit Guarantee Fund (KODIT)	MSMEs	Insurance and guarantees
	Korea Finance Corporation (KoFC)	Miscellaneous	It was established to replace KDB as a policy bank, but the new Korean government retreated the privatization of KDB and, in the future, the two institutions will be merged.

Source: DFIs Annual Reports, presentations and DFIs websites.

*ABDE (2013).

Another highlight is the existence of many regional DFIs in Brazil and Germany, showing a deep concern with regional development.

Furthermore, the completeness of the NSDFI of the countries in question is another relevant point that shows the importance of DFIs for the support of crucial sectors and/or segments to economic development. In Asia, there is a broad segmentation among the DFIs; South Korean and Japanese institutions are generally specialized, and when they operate in the same sector, size or segment, they use different financial instruments. However, even in these countries, there is a large and diversified institution.

Quantitative analysis of the institutions, by means of their financial data, also validates the importance of the DFIs in the countries. Table 2 shows the size of these institutions comparing them with their international peers. The institutions in the sample are large-sized; together they have US$ 3,275 billion in assets, and great part of these are composed by credit portfolios, except for CDC. In 2013, two institutions made a loss: JFC, still restructuring from the merger of various DFIs in 2008, which gave rise to the institution; and KDB, which had to register provisions for losses in loans for the restructuring of large corporations, and in financial assets investments, affected by the low Korean and global economic growth.

Examining the credit portfolio growth rates of some institutions with data available for all the period,[22] the stabilizing role in the credit market is reinforced (Graph 1). In 2008-2009 (subprime crisis) and in 2011 (European crisis), the credit portfolio average growth of the DFIs surpassed the previous years, pointing to the expansion of their activities in a moment of national and international credit market crunch resulting from the 2008 crisis.

[22] BNDES, CDB, KfW and KDB.

Table 2

Selected DFIs financial performance indicators*

	CDB (China)	KfW (Germany)	BNDES (Brazil)	JFC (Japan)	CDP (Italy)	CDC (France)	ICO (Spain)	KDB (South Korea)
Assets (US$ billion)	1,331.3	619.7	363.4	260.4	242.4	190.8	136.3	131.1
Credit portfolio (US$ billion)	1,162.3	528.8	263.5	222.8	137.6	36.6	95.0	87.9
Net profit (US$ billion)	13.0	1.7	3.6	(2.9)	3.1	3.1	0.1	(1.3)
Non performing loans[a] (%)	0.48	0.13	0.01	2.98	0.20	2.75	2.29	3.10
Return on asset - ROA (%)	1.02	0.27	1.01	(1.13)	1.29	1.61	0.08	(1.01)
Return on equity - ROE (%)	15.07	6.21	15.34	(6.84)	14.00	7.39	1.76	(8.85)
Number of employees	8,468	5,374	2,859	7,361	1,440	25,146	310	n.d.
Year of foundation	**1994**	**1948**	**1952**	**2008[b]**	**1850**	**1816**	**1971[c]**	**1954**

Source: DFIs annual reports (2013).

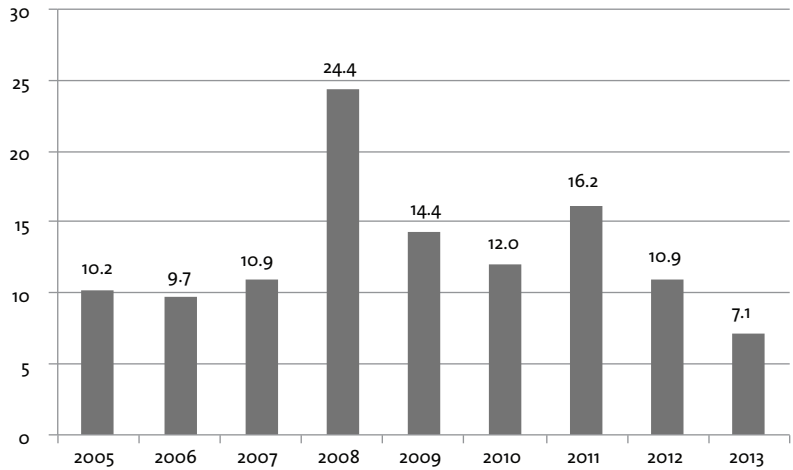
* We considered the values in the International Financial Reporting Standard (IFRS) and the average dollar of the year.

Notes: For Japan. which has a different fiscal year. we used the annual report of March 2014. [a] the concept may differ among countries. Calculated for KfW and JFC considering criteria similar to BNDES. [b] the JFC resulted from the integration of four institutions: National Life Finance Corporation (NLFC) – microcredit – founded in 1949 under the name of Peoples' Finance Corporation; Agriculture. Forestry and Fisheries Finance Corporation (AFC). founded in 1953; Japan Finance Corporation for Small and Medium Enterprise (JASME). founded in 1953; and credit division to export of the Japan Bank for International Cooperation (JBIC). founded in 1950. However. in April 2012. JBIC separated from JFC. [c] the ICO was founded in 1971 as a regulator of public banks. but in 1988 it became an official public bank.

Graph 2 shows the assets of DFIs as a proportion of the countries' Gross Domestic Product (GDP). We can see that only two DFIs have the ratio asset/GDP lower than 10%, showing the relevance of DFIs to their countries.

Graph 1

Selected DFIs credit portfolio average growth (%)



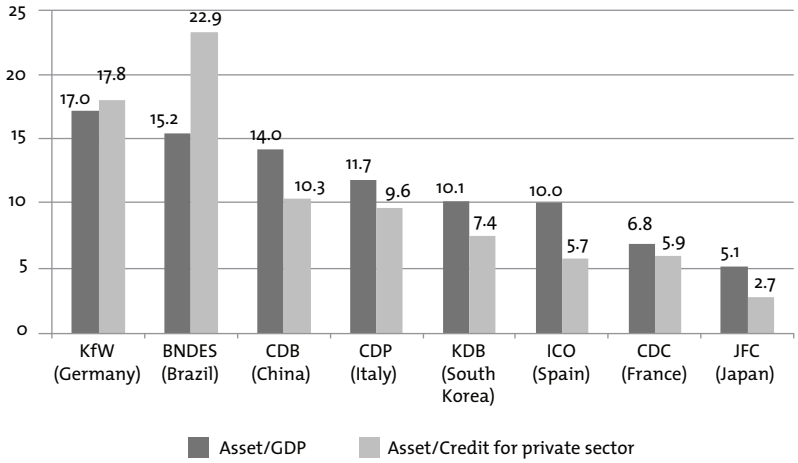
Another important index, illustrated on Graph 2, is the ratio asset/total domestic credit to the private sector (DCPS). The DCPS concept used was the same as the one used by the World Bank,[23] where the data were collected. The aim is to avoid any methodological distortion. For the World Bank, whose information is based on the International Financial Statistics (IFS) of the International Monetary Fund (IMF), this index has a broader concept, including not only the loans, but also other financial instruments for company debt with

[23] Differently from Ferraz, Além and Madeira (2013), who searched for data of credit stock from the countries' official sources and from some international statistics organizations.

the financial system.[24] In spite of referring to the private sector, the concept includes state-owned (public) companies and mixed (public and private) enterprises. This broader concept suits the DFIs' activities, which operate through various financial instruments, not being limited by loans supply. In order to demonstrate the importance of the financing from these institutions in economy, Graph 3 presents similar indexes, but only with data from the credit portfolio, instead of the total assets.

Graph 2

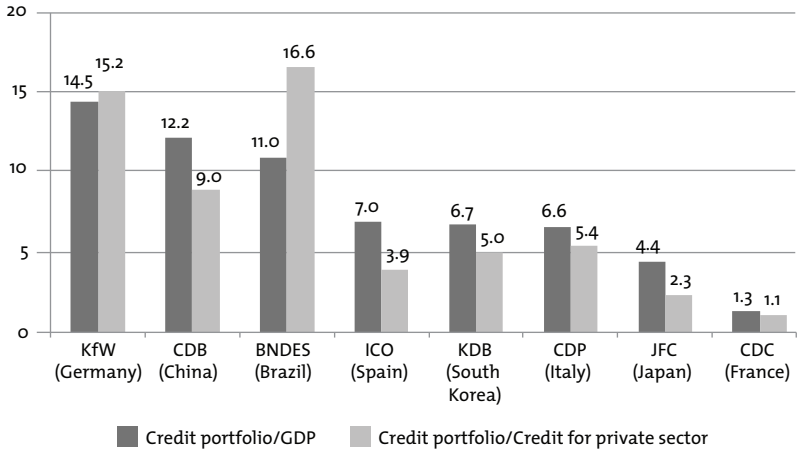
DFIs assets indicators – 2013 (%)



[24] "(...) financial resources provided to the private sector by financial corporations, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises. The financial corporations include monetary authorities and deposit money banks, as well as other financial corporations where data are available (including corporations that do not accept transferable deposits but do incur such liabilities as time and saving deposits" (World Bank Database).

Graph 3

DFIs credit portfolio indicators – 2013 (%)



Comparing graphs 2 and 3 and analyzing Table 2, we can see that some institutions have a smaller ratio of credit portfolio in the asset mix. This can be interpreted as a larger presence of other financial products – stake in companies, guarantees, or private bonds purchase. This is the case of CDC, which has a large stake in companies and a low ratio of credit portfolio. Analyzing in detail the DFIs' financial products, however, is not in the scope of this paper, being left for a future research agenda.

Empirical evidence and international experiences show that DFIs, both in developed and developing countries, are large-sized and have high representativeness in their economies, being fundamental for the provision of financial resources, especially long-term, to the economic development. Besides, it was shown that they are diversified institutions, acting in niches that are deprived of long-term financing.

A more detailed research, in which all the DFIs of the mentioned countries were aggregated in NSDFIs, would certainly indicate an

even larger dimension of representativeness of these institutions in financing of development.

Just as an example, in China, the three DFIs cited in this paper represented about 22% of the Chinese GDP, in terms of assets in 2013.

It is important to highlight that just having DFIs is not enough for countries to be able to adequately finance their economic and environmental development. It is crucial that these institutions are solid, financially balanced and have a stable funding, so that they can fulfill their mandates successfully.

A future research agenda, which would be subjected to data availability, includes the assessment of financial data from the perspective of the long-term credit market, as well as the aggregation of various institutions in the countries.

Conclusions

The availability of long-term financing is crucial to the investment in key sectors to economic development, for example infrastructure, innovation and sustainability. Therefore, it is of utmost importance that there is a stable and favorable macro-financial environment to foster the existence of institutional structures aiming at this purpose.

DFIs are historically relevant to provide such long-term financing, in developed or in developing countries. The DFIs' practice must be complementary to the private sector, acknowledging the incapacity of the latter to lead the economy to a new development path and to structural change. Moreover, they are important to mitigate the cyclical behavior of the private financial system and to cooperate with governments in the implementation of public policies. The DFIs generally have the capacity to assess projects beyond their

financial profile, considering many relevant variables, as well as externalities and impacts.

Empirical evidence illustrates the relevance of DFIs in their countries, showing that they are large-sized and much diversified. Many developed nations have three or more DFIs acting in numerous segments and/or sectors using different financial instruments. Furthermore, the DFIs' financial data seen from a macro-economic perspective show the importance of these institutions in the financing of the productive sector of economy. The credit portfolio growth rates during the 2008 crisis evidenced the importance of DFIs for the stabilization of credit market in their countries.

Therefore, countries at any level of development have a strong system of DFIs, diversified, with great economic representativeness and as the protagonist of a resilient financial system, boosting development.

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